

The FRBR Model (Functional Requirements for Bibliographic Records)



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Abstract: FRBR is a conceptual model of the bibliographic universe created within IFLA to describe entities, relationships, and attributes (i.e., metadata). User tasks are also related to traditional objectives for catalogs. This presentation will describe the FRBR model and its impact on library systems and cataloging codes worldwide.

Let's now look at the Functional Requirements for Bibliographic Records - the entities, relationships, and attributes from that model to describe how it is currently affecting work on the *Anglo-American Cataloguing Rules* and the extension of the model into the area of authority control. I was a consultant along with Tom Delsey, Elaine Svenonius, and later Beth Dulabahn of the Library of Congress in developing the conceptual model within IFLA, the International Federation of Library Associations and Institutions.

<http://www.ifla.org/VII/s13/wgfrbr/wgfrbr.htm>



FRBR

- Publisher: K.G. Saur

<http://www.ifla.org/VII/s13/frbr/frbr.htm>

<http://www.ifla.org/VII/s13/frbr/frbr.pdf>

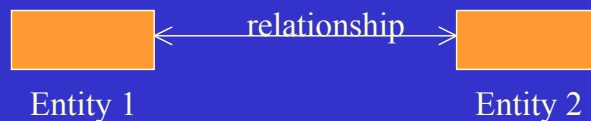
From 1992-1995 the IFLA Study Group on Functional Requirements for Bibliographic Records developed an entity-relationship model. We described a conceptual model and functional requirements known as FRBR, or sometimes pronounced as “ferber.” You can get FRBR online, and it’s also available in print from the publisher, K.G. Saur (1998). The URL on the entity-relationships model is shown on this slide.

What is it? It is a generalized view of the bibliographic universe and is intended to be independent of any cataloging code or implementation.

Entity-Relationship Model

FRBR

- Entities
- Relationships
- Attributes (i.e., metadata)



The FRBR report itself includes a description of the conceptual model of the bibliographic universe: that is, the **entities**, **relationships**, and **attributes** (or as we'd call them today, the metadata) associated with each of the entities and relationships, and it proposes a national level bibliographic record for all of the various types of materials. It also reminds us of **user tasks** associated with the bibliographic resources described in catalogs, bibliographies, and other bibliographic tools.

An entity-relationship model was chosen, as it was a well accepted modeling technique at the time (E-R models were developed by Paul Chen several decades ago.) It could just as well be an object-oriented model today. In fact, the IFLA Section on Cataloguing started a new Working Group on FRBR chaired by Patrick Le Boeuf to explore an object oriented model of FRBR and to promote the continued development and expansion of this model. What is most important are the concepts. The convention of entity-relationship notation was used in the FRBR diagrams, but it was intentionally kept simple. Boxes for the entities, connecting lines for relationships. For example, the recursive nature of works was not diagrammed, although the consultants recognized that fact that "works" are recursive - you can have a work that consists of other works.

Why is FRBR important? Why are we talking about a conceptual model? It describes the universe as we know it today, using new vocabulary to free us from the baggage of past terms that were ambiguous. It really gives us a fresh look at the bibliographic universe using more precise language to help clarify concepts and terms that we have used in the past and to help us explore new ways to fulfill the objectives of catalogs.

Objectives of Catalogs

- Cutter's objectives for the catalog
 - Finding - *description and access standards*
 - Collocating - *controlled "vocabularies" for precision of searching*

In 1876 Charles Ammi Cutter published the first edition of his cataloging rules and identified several objectives for a library catalog, including finding and collocating.

We assume the library has a target group of users with particular needs and that the catalog of the library should enable users to find what they need. This finding objective is accomplished through standards for description and access in our rules. The catalog should also collocate the works of an author, and that requires the use of controlled vocabularies and leads to greater precision of searching. A catalog may also collocate bibliographic records for entities on a particular topic.

The FRBR entities are very useful to meet the collocation or gathering objective.

“User Tasks” - FRBR

- Find (locate and collocate)
- Identify
- Select
- Obtain

Also could add

- Relate/Navigate
- Attribute Royalties to
- Preserve

In the *Functional Requirements for Bibliographic Records*, we address “user tasks” - things we feel a user wants to do relative to the bibliographic universe:

Find an entity or entities in a database using attributes or relationships -Elaine Svenonius has suggested this should actually be in two parts - to locate and to collocate entities. The user does this by searching the catalog and in some models that Tom Delsey has prepared for groups since FRBR, he has named this task “search.” I still think the user is trying to find, so I’ll keep this as is.

Identify - to confirm that the entity found corresponds to the entity that you are looking for

Select - to choose an entity meeting the user requirements for content, physical format, etc.

Obtain - to acquire an entity or to access an item

And we could add a task to *relate or to navigate*- that is to relate the materials a user finds to others that may be in the collection. And FRBR describes individual elements or attributes, indicating how each contributes to achieving each task.

Today we might expand the use of FRBR to the rights management or preservation domains and add other tasks, like *attributing royalties to* or *preserving*.

FRBR is an evolving model and will be extended in the future.

We may find this conceptual model enables us to meet the objectives of a catalog in new ways.

FRBR Entities

Group 1: Products of intellectual & artistic endeavor

- **Work**
- **Expression**
- **Manifestation**
- **Item**

In the FRBR conceptual model, the bibliographic universe consists of several entities that are related to each other and can be described through data elements (or attributes). The entities themselves are sorted into 3 groups.

Group 1 – are the products of intellectual and artistic endeavor that are named or described in bibliographic records : work, expression, manifestation, and item.

FRBR Entities

Group 2: Those responsible for the intellectual & artistic content

- Person
- Corporate body

Group 2 - are the entities responsible for the intellectual or artistic content, the physical production and dissemination or the custodianship of such products: person and corporate body

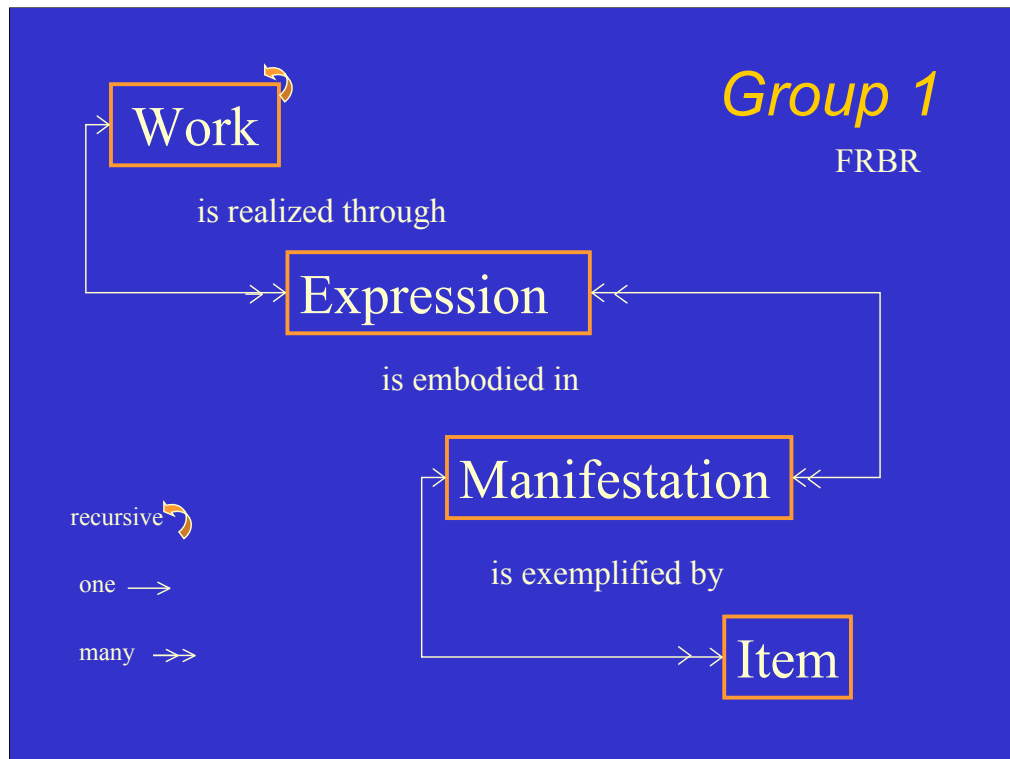
FRBR Entities

Group 3: Subjects of works

- **Groups 1 & 2 *plus***
- **Concept**
- **Object**
- **Event**
- **Place**

Group 3 - are the entities that serve as the subjects of intellectual or artistic endeavor: concept, object, event, place, and any of the Group 1 or Group 2 entities – you can have a work about another work or a work about a person, etc.

FRBR itself focused on the Group 1 entities and a new IFLA working group, FRANAR (Functional Requirements for Authority Numbers and Records), is looking at Group 2 entities to continue the development of this model again with the assistance of Tom Delsey. Let's look at each group a bit more.



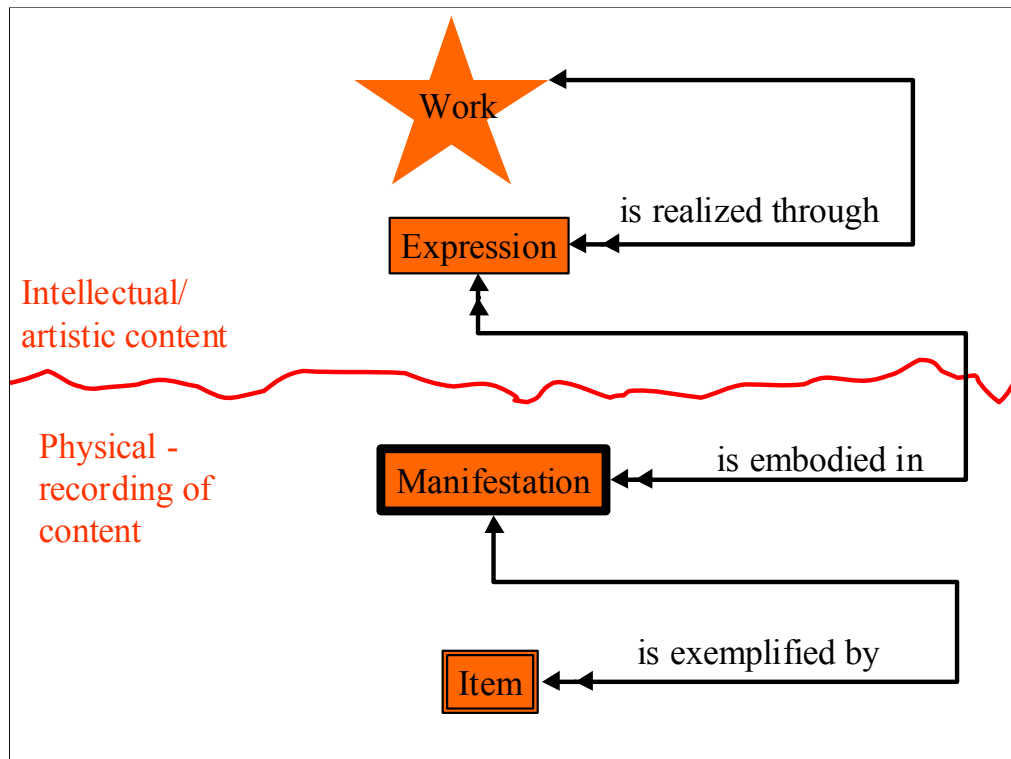
Group 1 are the entities that are the product of intellectual or artistic endeavor. The entities form a hierarchy with work at the top of the model.

As I mentioned before, it is also important to realize that sometimes we deal with works that include other works (a recursive relationship), and we have collections of items stored together when we create cataloging records or inventory control records, so we deal with the “Level of granularity” and whole/part relationships – aggregates and components.

Work, according to FRBR, is a distinct intellectual or artistic creation. It is an abstract entity. The boundaries of a work are sometimes dependent on the cultural or national view, but FRBR suggested some boundaries - we’ll look at this more in a moment. I like to think of it as the **ideas** that a person has.

A work is realized through an **expression** - another abstract entity. An expression is the intellectual or artistic realization of a work in the form of alpha-numeric notation, musical notation, choreographic notation, sound, image, object, movement, etc., or any combination. The person decides how he or she wants to express the ideas – as text, sound, image, etc. and in what language.

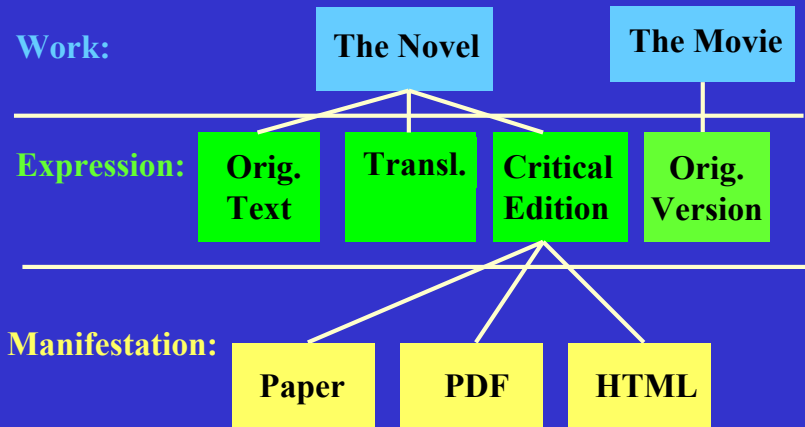
Using this model, one could even collapse both “work” and “expression” into something called an “abstraction” when that was found to be useful for a particular application. It should be noted however, that FRBR kept them separate.



When we **record** the intellectual or artistic content, we move from the abstract “work/expression” to a physical entity. As FRBR puts it, a **manifestation** is the physical embodiment of an expression of a work. In order to **record** something you have to put it **on** or **in** some container or carrier. So, manifestations appear in various “carriers,” such as books, periodicals, maps, sound recordings, films, CD-ROMs, DVDs, multimedia games, Web pages, etc. A manifestation represents all the physical objects that bear the same characteristics of intellectual content and physical form. In actuality, a manifestation is itself an abstract entity, but describes and represents physical entities, that is all the items that have the same content and carrier. So as we catalog, we describe the manifestation - & other libraries that have copies of the same manifestation can use the same bibliographic record.

One example or exemplar of a manifestation is called an **item**. Usually it is a single object, but sometimes it comprises more than one physical object, e.g., a monograph issued in 2 separately bound volumes or a sound recording on 3 separate CD’s. With an item entity, we are able to identify individual copies of a manifestation and to describe its unique attributes - this may be information relevant to its circulation or preservation – or we could say things about it like it has the autograph of the author.

FRBR Entity Levels

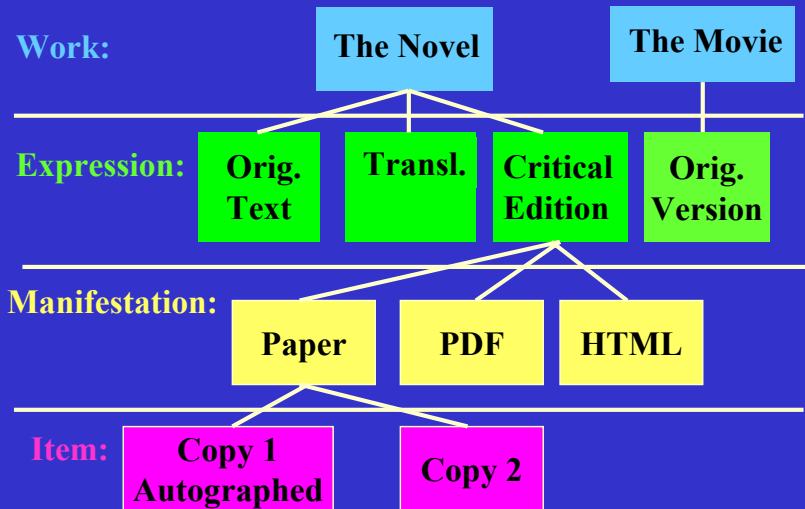


Let me show you an example

Starting with the work of *Gone with the Wind*, it was expressed in many ways including an original text, translations, a critical edition and editions with illustrations, and many more. There was also the work of a motion picture based on the work, *Gone with the Wind*.

Once the expressions are recorded in some physical form, we have a manifestation - shown here for the critical edition as a paper book and two electronic editions - one in PDF format and the other in HTML. Those manifestations are also related to the expression they are based on.

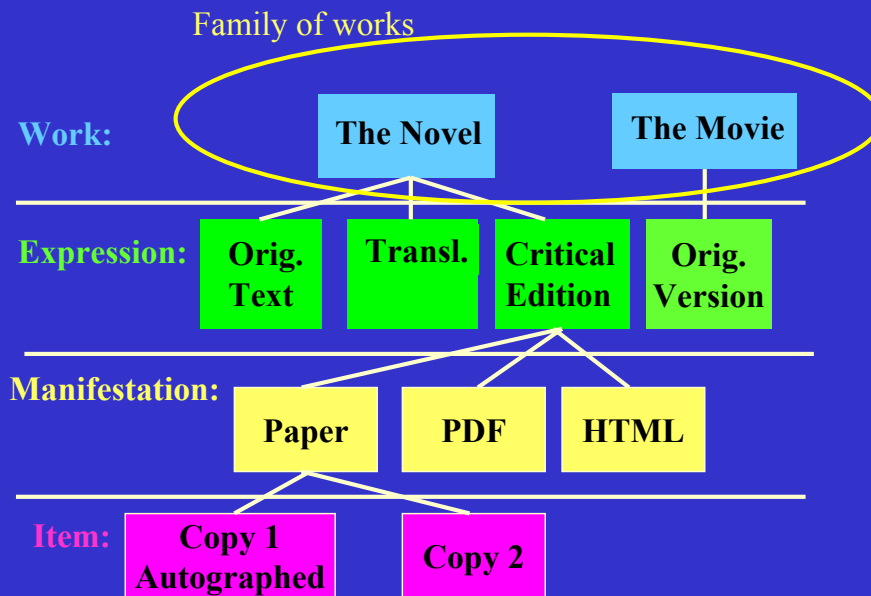
FRBR Entity Levels



At the item level – that’s where we would see the specific copies held in a library. An item would have attributes like its call number and the location where it is stored and any item specific notes, for example, that it is an autographed copy of the paper text of the critical edition – would have a box linked to the paper manifestation.

The FRBR model was intentionally kept to the four levels of entities in Group 1 to try to keep it simple. One can easily imagine adding many more levels to further categorize –as catalogers love to do, but conceptually three or four seems to work quite well to meet the user tasks and objectives of a catalog.

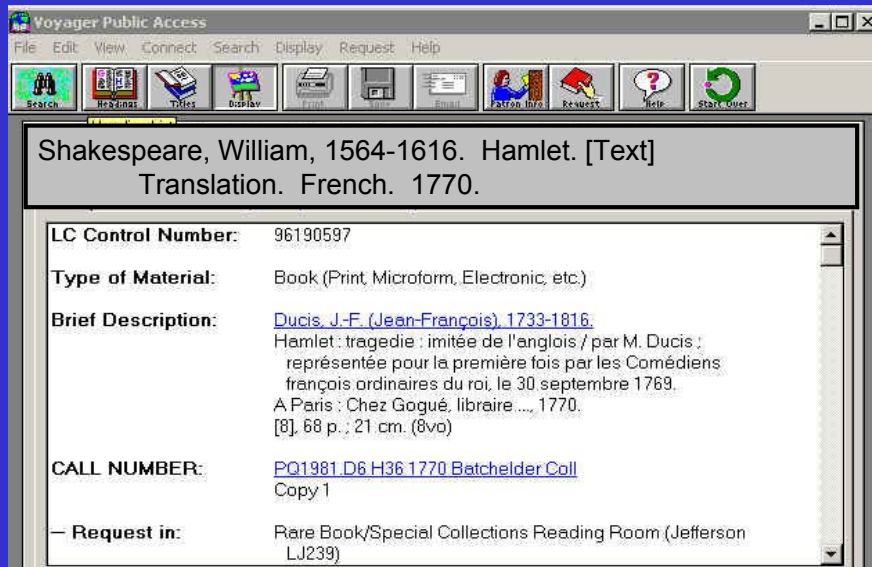
FRBR Entity Levels



It sometimes helps to think of works as being in a family of works where there may even be a “super work” as Rahmat Fattahi and I believe Martha Yee called it, but that would be one of the family of works. We might find this helpful for the more complex works as a way of thinking about how to **display** them in meaningful ways to users of a catalog or bibliographic listing – to group them together.

You might even consider another level for performances under expressions, but the FRBR model would not add another level. We also need to keep in mind the use of this model and how it might be applied to improve on the catalog displays we offer today.

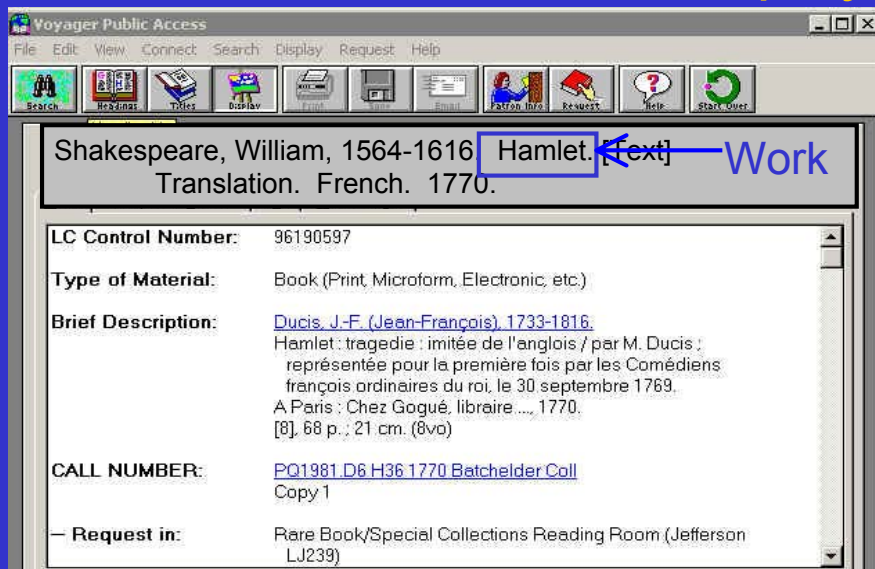
“FRBR-ized” OPAC Displays



Let's imagine how we might FRBR-ize the Voyager records to use FRBR's entities for collocation purposes in our displays. When we browse under Shakespeare in the online catalog, we could group the various works and let the user select which work they want. Then we could group the various expressions we have of that work – or do it all at one – sort of like what we already do with uniform titles.

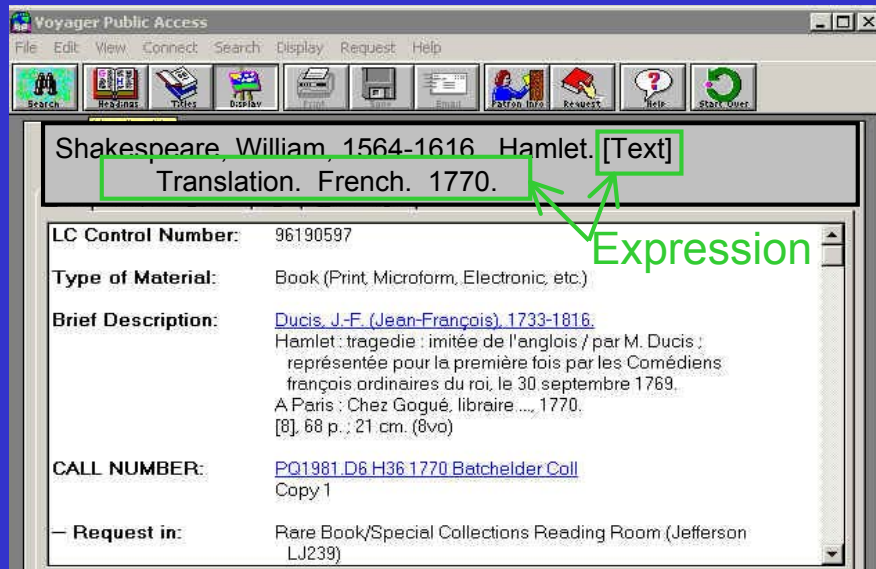
It turns out there is something like less than 20% of all the records in the OCLC database have more than a single manifestation, so we would not need such expression-level citations, or uniform titles for more than 20% of all the things we catalog...

“FRBR-ized” OPAC Displays



Part of the expression level citation would be the work-level citation and we'd add on to that

“FRBR-ized” OPAC Displays



For the expression-level citation. The OPAC display could also show us the specific

“FRBR-ized” OPAC Displays

Voyager Public Access

File Edit View Connect Search Display Request Help

Search Reading Titles Display Print Email Patron Info Request Help Start Over

Shakespeare, William, 1564-1616. Hamlet. [Text]
Translation. French. 1770.

LC Control Number: 96190597

Type of Material: Book (Print, Microform, Electronic, etc.)

Brief Description: [Ducis, J.-F. \(Jean-François\), 1733-1816.](#)
Hamlet : tragedie : imitée de l'anglois / par M. Ducis ;
représentée pour la première fois par les Comédiens
françois ordinaires du roi, le 30 septembre 1769.
A Paris : Chez Gogué, libraire, 1770.
[8], 68 p. : 21 cm. (8vo)

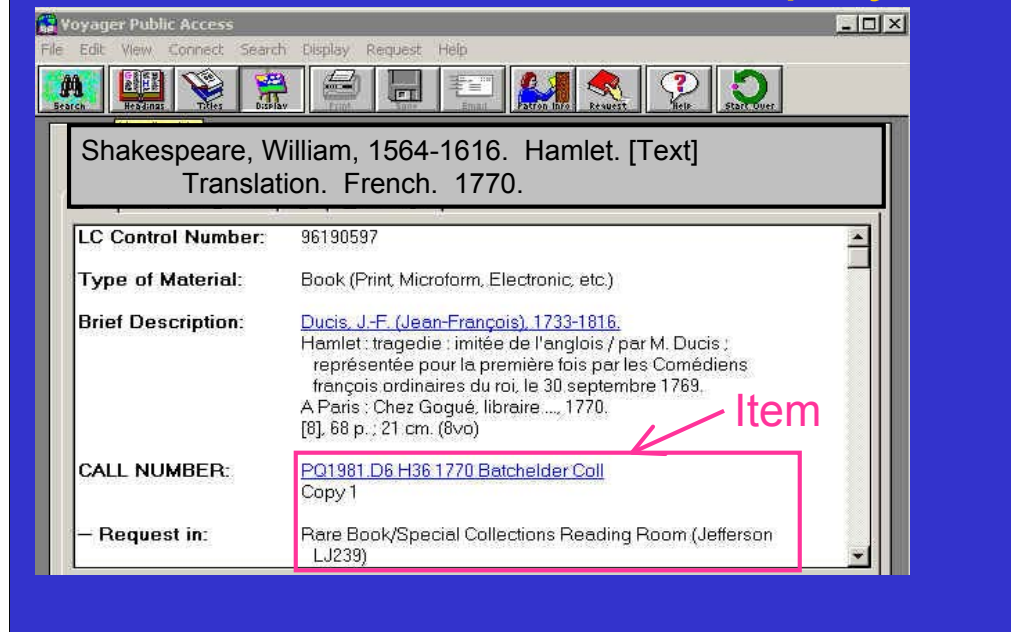
CALL NUMBER: [PQ1981.D6 H36 1770 Batchelder Coll](#)
Copy 1

— Request in: Rare Book/Special Collections Reading Room (Jefferson
LJ239)

Manifestation

Manifestation – just as we do now and also the individual

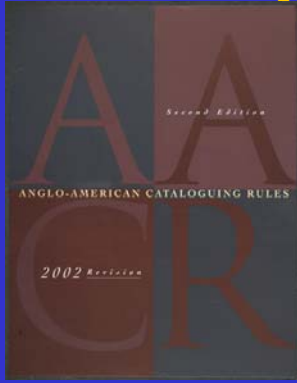
“FRBR-ized” OPAC Displays



Items that we hold in our collections.

It's not so very different from what we do now. The point of using this model is to help clarify concepts that have been very muddy in our rules in the past and things we typically ended up learning through experience. Using the FRBR language in the rules should make concepts clearer. At least we hope so.

Joint Steering Committee for Revision of AACR2 (JSC)



- Task Force on Format Variation

- Work-level citations
- Expression-level citations

Update AACR terminology to use FRBR terms:

- Work, Expression, Manifestation, Item

In 2001, the Joint Steering Committee for Revision of the Anglo-American Cataloguing Rules (known as JSC) commissioned a Task Force to explore the issues of Format Variation, specifically with respect to FRBR entities. In their last report to the JSC, they discussed the use of work-level citations and expression-level citations (that we now call uniform titles) and removing the main entry/added entry terminology (using instead things like headings and access points and bibliographic records).

Jennifer Bowen chairs the Task Force. She asked the bibliographic utilities and vendors to share information on applying FRBR and both RLG and OCLC are experimenting with FRBR in some of their research activities and plans for their future systems. VTLS has also developed a prototype that, as they put it, has “FRBR-ized” their new version of Virtua, which is their integrated library system.

The JSC is also seeking to update the language throughout AACR to reflect FRBR terminology. Pat Riva from McGill University in Canada, was charged with that task and has just updated her recommendations.

Modes of Expression FRBR

- Alpha-numeric
- Music notation
- Other notation (e.g., choreographic)
- Sound
- Still image
- Moving image
- Three-dimensional object
- Combinations of above

The JSC is also re-examining the General Material Designators (GMDs), as I mentioned earlier, and the FRBR “modes of expression” may be useful for this analysis. We are even exploring the possibility of using icons to represent these modes of expression in collocated displays in the online catalog.

Expressions in FRBR are identified by the mode in which they have expressed the ideas or content of a work, and this can also include the language or a date to identify the expression. These attributes are the metadata that identify the expression.

Any Questions about the Group 1 entities before I move on to relationships?

Group 1 - Relationships Inherent to the Entities

FRBR

- Work *“is realized by”* an expression
 - Expression *“is embodied in”* a manifestation
 - Manifestation *“is exemplified by”* an item
 - Item

Let's now move on to **relationships** for the Group 1 entities. Relationships are a big part of the FRBR entity-relationship model.

There are also several types of relationships that we can consider.

But how do we know about these relationships? We rely on information that we pick up from examining items and transcribing information we feel is useful to bibliographic description and access from the items we are examining.

Within FRBR there are relationships that are inherent among the entities - as we've already seen in the model.

A work “is realized by” by an expression – that’s a relationship,
and an expression “is embodied in” a manifestation – that’s a relationship.

A manifestation “is exemplified by” an item – that’s a relationship.

A characteristic of a work is carried to all the entities below it in the hierarchy through a transitive relationship.

Relationships - Work/Expression

w₁ Charles Dickens' *A Christmas carol*

e₁ the author's original English text

e₂ a Tamil translation by V.A. Venkatachari

FRBR

“is realized by”

FRBR, p. 59

We link expressions to the work they “realize” or express.

Implicitly the expressions of the same work have a sibling relationship to each other.

FRBR itself provides several examples. Let's look at this one:

work 1, Charles Dickens' *A Christmas Carol*, **is realized by** (that is the relationship) two expressions

expression 1 - the author's original English text and

expression 2, a translation in the Tamil language - and there are, of course, many more.

Relationships - Work/Expression/Manifestation

w₁ J.S. Bach's *Goldberg variations*

e₁ performance by Glen Gould in 1981

m₁ recording released on 33 1/3 rpm sound disc in 1982 by CBS Records

m₂ recording re-released on compact disc in 1993 by Sony

m₃ digitization of the Sony re-release as MP3 in 2000

FRBR
“is embodied in”

Based on FRBR, p. 59

An expression then “is embodied in” a manifestation. Notice that we are showing here a musical performance.

Music can be performed, but only when it is recorded do we have a manifestation.

Work 1 - J.S. Bach's *Goldberg variations*... is realized by the expression - that is, the performance by Glen Gould, which in turn “**is embodied in**” at least these 3 manifestations:

m1 - the recording on a phonograph record

m2 - a re-release on a compact disc and

m3 - a digitization on an MP3 file.

Implicitly the manifestations of the same expression have a sibling relationship to each other - that may be an equivalent content.

Relationships - Work/Expression/Manifestation/Item

w₁ Lost treasures of the world

e₁ the interactive electronic resource

*m₁ the CD published in 1994 by Follgard CD-
Visions*

i₁ first copy held by Calgary Public Library

*i₂ second copy held by Calgary Public
Library*

FRBR

“is exemplified by”

FRBR, p. 60

An item is then a single exemplar of a manifestation.

Work 1, *Lost treasures of the world*, is realized by the expression (conceived as an interactive electronic resource that is embodied in the manifestation of a CD), that “**is exemplified**” by two items in the Calgary Public Library - that is two physical copies.

All copies that are linked to the same manifestation have a sibling relationship to each other.

FRBR Group 1 Content Relationships

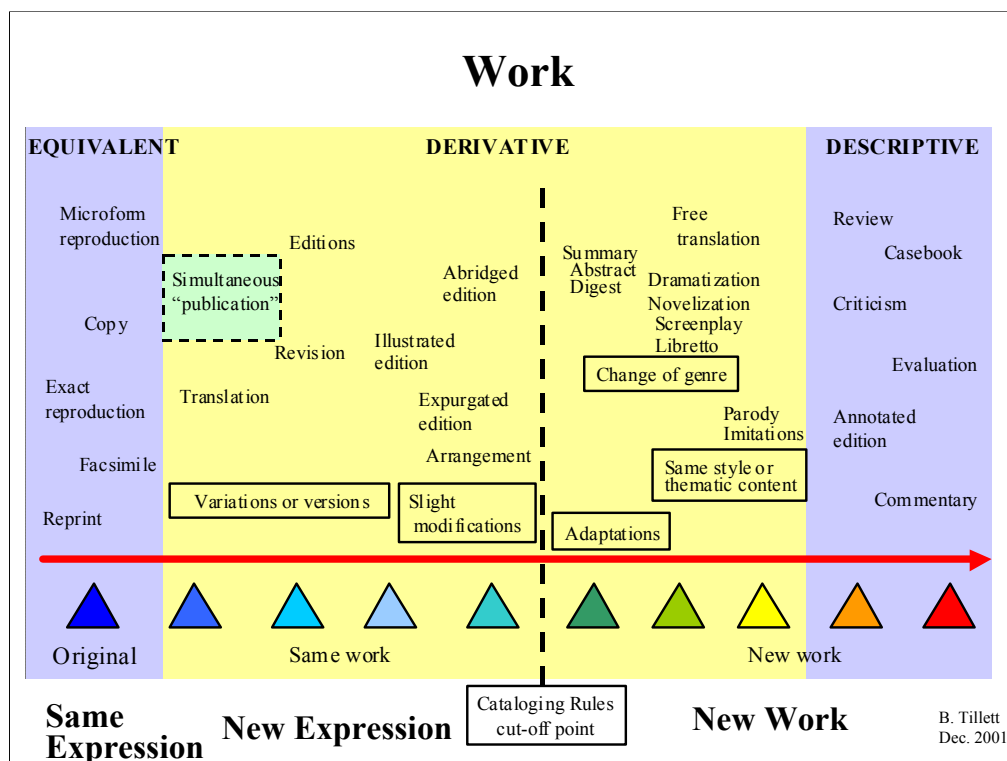
- **Equivalent**
- **Derivative**
- **Descriptive**

Work to work relationships are
inherited by hierarchically related
Expressions
Manifestations
Items

Another way to look at this is through the **content relationships** among works, that are then inherited by their expressions, manifestations, and items.

Some of these are described in FRBR, such as equivalent, derivative, and descriptive relationships of the content.

Any of these content relationships at the work level are also inherited by the hierarchically related expressions, manifestations, and items – again through a transitive relationship.



This picture is from my latest update of the taxonomy of bibliographic relationships that was published by Kluwer¹ in 2001. It shows a continuum of the relationships of a family of works moving from left to right from equivalent content at the left to descriptions of other works at the right. If we look at the types of works and expressions in terms of the FRBR model, this entire picture can be seen as the family of works. Those that are equivalent are from the same expression of the work. Once we introduce a change to the content, like a translation, we have a new expression of the same work.

Once that derivation crosses the magic line of becoming more of the work of another person or corporate body, we consider it a new work, but in this recursive relationship, it, too, is part of the family of related works, even when the work moves on to be only describing a work in the family at the right end of this continuum. The entities in descriptive relationships can even be considered to be in subject relationships in FRBR terminology and conceptual model. The ability to inform the user of these related works ties back to the collocating and finding functions of a catalog again.

¹ In: *Relationships in the Organization of Knowledge*. – Carol Bean and Rebecca Green, ed.s. – Kluwer, 2001 (ISBN: 07923-68134)

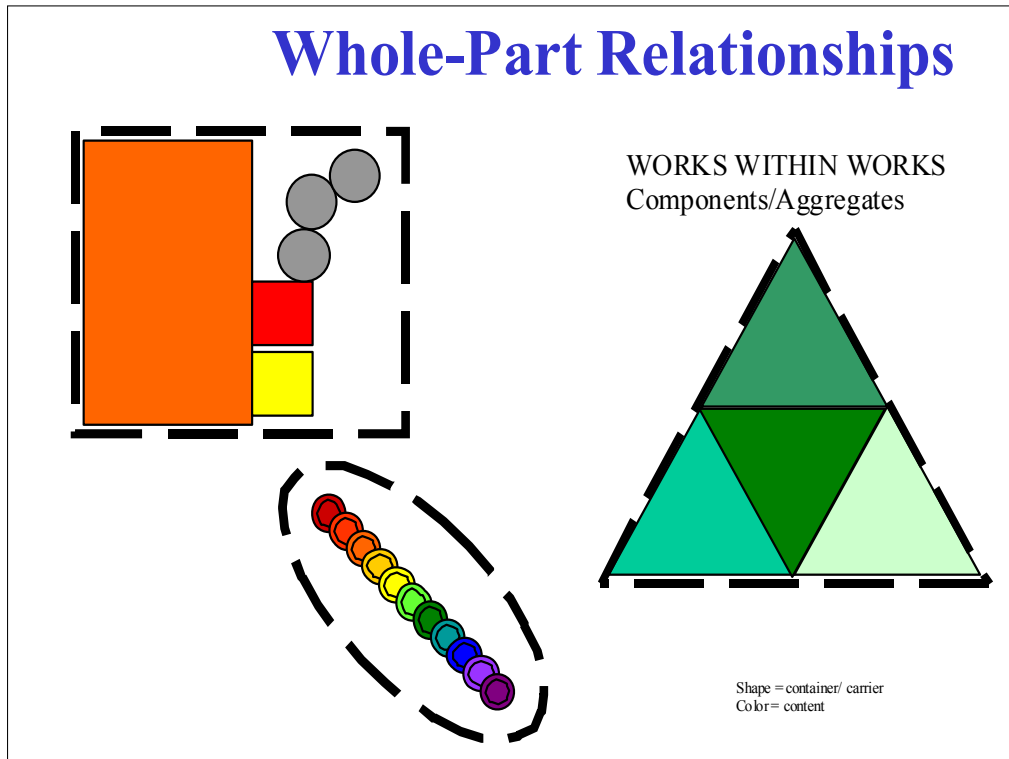
Whole-Part Relationships

- **Components**
- **Aggregates**

A particularly important relationship for the digital world is whole-part. Components and aggregates - think of a Web site - as a whole and its parts as the components.

Or a serial as the whole aggregate work with the issues as component works.

Whole-Part Relationships



Types of relationships are particularly interesting with **electronic** materials where images and text and/or sound become components of the whole and need to be addressed and brought together (aggregated) for displays, yet often are stored as separate components (such as is shown in the figure at the top left in **orange**).

Another whole-part example is an anthology or a finite set (which is the whole) with its distinctive, separate works (or parts) (as shown in the triangle **green** figure on the right). Finally, integrating resources - loose-leafs with an end or a multivolume set, multipart series are other examples.

Other parts may continuously add to the corpus of content, as the separate issues of print or electronic serials and integrating resources, or articles in an integrating online serial or a web site (as shown in the figure at the **bottom**) with the connected circles.

With an e-journal the web site is the whole but it consists of component articles, and as new articles are posted on the site, the site continues to grow as a continuing or integrating resource.

Part-to-Part Relationships

- **Component to component**
 - Sequential Relationship
 - Accompanying Relationship (or Companion Relationship)
 - Dependent
 - Independent

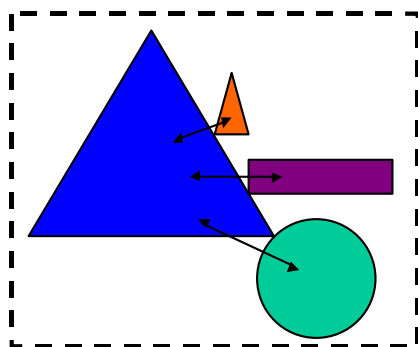
Also particularly interesting in digital materials is the relationship among parts... FRBR recognized these as did I in my dissertation, as sequential and accompanying or companion relationships.

We can carry it further by describing those companion relationships where the components are either dependent or independent. This usually translates into bibliographic records again. Do we make a note for the dependent component or do we make a linked separate bibliographic record for the independent component?

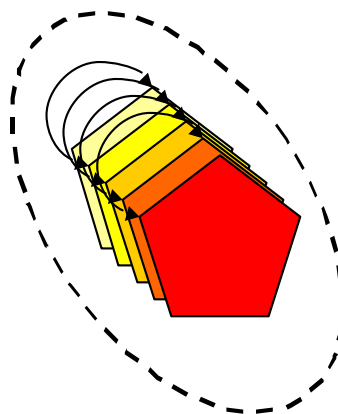
Part-to-Part Relationships

WORKS WITHIN WORKS
Components-to-Component

Accompanying Relationships



Sequential Relationships



Shape = container/ carrier
Color = content

The part-to-part relationships between the individual components of a serial or between a prequel and a sequel are sequential relationships - important for ordering and assisting the user in determining the sequence of parts for finding information

Accompanying relationships, also called companion relationships in discussions of FRBR - how between an entity intended to be used with or to augment another entity. Examples are supplementary maps intended as companions to a video,

a computer disk that accompanies as textbook,

accompanying plates intended to illustrate a main text

a score that accompanies a sound recording,

or a booklet of words to songs that accompany a CD music recording.

The pieces can be viewed either as dependent parts of a whole or as separate entities in their own right that can exist independently of each other, but are packaged together. In this latter situation, the accompanying or companion relationship can also be viewed as existing beyond the continuum of close content relationships, because the entities are (or contain) different works that complement the content of another work that is another component of the whole.

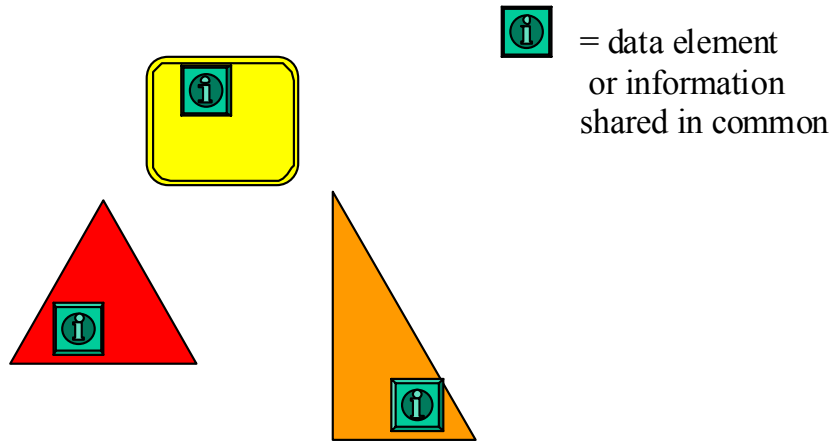
Shared Characteristics Relationships

- **Different works sharing an element (attribute) in common**

The idea of a shared characteristic relationship, could also be modeled as an inherent relationship that comes from having an attribute in common, although it was not specifically included in FRBR.

DIFFERENT WORKS

Shared Characteristic Relationships



Let's say the language Swahili is the data element and when we include that information in a bibliographic record, we can later use that information for retrieval to collocate all the works and expressions in that language.

You can see how this has gained importance in online catalogs where we can limit searches by certain characteristics we are looking for.

Attributes FRBR

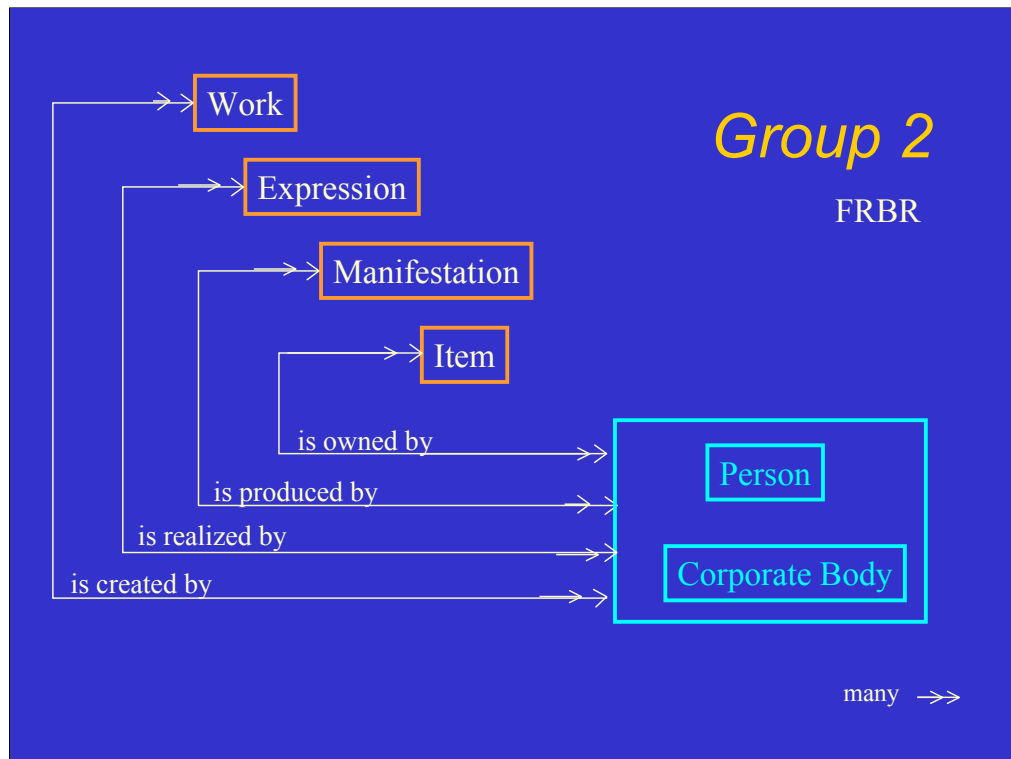
- **Work**
 - ID
 - Title
 - Date
 - etc.
- **Expression**
 - ID
 - Title
 - Form
 - Date
 - Language
 - etc.
- **Manifestation**
 - ID
 - Title
 - Statement of responsibility
 - Edition
 - Imprint (place, publisher, date)
 - Form/extent of carrier
 - Terms of availability
 - Mode of access
 - etc.
- **Item**
 - ID
 - Provenance
 - Location
 - etc.

Moving on, the attributes (**metadata**) in FRBR were based on what now exists in bibliographic records and may need updating as more thinking is given to this topic, but here are some of the essential attributes or elements that we associate with each of the primary entities.

For a **work**, the main elements are a title, date, possibly its identifier (if it has one), etc. You notice we don't have "author" as an attribute for work or expression, because such information is treated in this model as a relationship between the work or expression and a person or corporate body (Group 2 entities).

Let you see at **manifestation**, we have the statement of responsibility as found on the item being cataloged - that is information unique to the manifestation and is description.

For our purposes the activity of recording an **expression**, turns an entity into something of interest to a library - something we would add to library collections and catalog - for which we would provide bibliographic control - description and access. A **manifestation**. In the digital world we can envision the basic bibliographic description being an integral part of a digital object - the software that helps create the digital object or digitizes an analog object, would automatically provide a basic set of metadata, that is attributes or data elements. Think of how the software for word processing, like Microsoft's Word, suggests a name for your document based on the first words you type - ironically the "tiles" for early manuscripts were the first line of text. Software now also automatically provides the date you created it. There is already a camera that has built in the MPEG-7 standards for creating basic metadata for the digital images it captures. So we can envision the automatic creation of some of the attributes we'd need for bibliographic control for description and access. **Q's before move on to Group 2 entities and their relationships?**



Let me now move on to the Group 2 entities: person and corporate body.

You see the relationships with the Group 1 entities in this picture:

work is created by a person or corporate body

expression is realized by a person or corporate body

manifestation is produced by a person or corporate body

item is owned by

a person or corporate body.

Relationships - Person/Work

w₁ *The shepheardes calendar*

w₂ *The faerie queen*

w₃ *Astrophel*

... etc.

p₁ Edmund Spenser

FRBR

“created by”

FRBR, p. 61

A “Created by” relationship connects a work to a person or corporate body responsible for the creation of the intellectual or artistic content of the work.

This link serves to collocate all the works of a single person or corporate body.

For example, person, Edmund Spenser is in a “created by” relationship to his works.

Relationships - Corporate Body/Expression

e_1 a 1980 performance of Allegri's *Miserere*

e_2 a 1986 performance of Josquin's *Missa
pange lingua*

e_3 a 1989 performance of Lassus' *Missa
osculetur me*

...

cb_1 The Tallis Scholars

FRBR

“realized by”

FRBR, p. 61

A “Realized by” relationship links an expression with a person or corporate body responsible for the realization of a work. Here's where we see the difference between the work and expression.

A person or corporate body responsible for the expression of a work is responsible for the specifics of the intellectual or artistic realization or execution of the expression. The idea of the content of the work may have been created by someone else.

This link serves to collocate all the expressions of a single person or corporate body.

Relationships - Corporate Body/Manifestation

m₁ the 1965 publication by Coach House Press
of Wayne Clifford's *Man in a window*

m₂ the 1966 publication by Coach House Press
of Joe Rosenblatt's *The LSD Leacock*

m₃ the 1966 publication by Coach House Press
of Henry Beissel's *New wings for Icarus*

...

cb₁ Coach House Press

FRBR

“produced by”

FRBR, p. 62

A “Produced by” relationship links a manifestation with a person or corporate body responsible for the publication, distribution, manufacture, or fabrication of the manifestation.

This “produced by” link serves to collocate all the manifestations produced or disseminated by a single person or corporate body.

In the current AACR cataloging rules, we take the form of name for the producer as it is transcribed from the chief source of information and do not try to control that form. However, the French in their rules do control the names of publishers... this may need re-examining.

Relationships - Corporate Body/Item

- i₁** a copy of the “Penkill Proofs” of D.G.
Rossetti’s *Poems* printed in August 1869,
with manuscript annotations by the author
- i₂** a copy of the “A Proofs” of D.G. Rossetti’s
Poems printed in September 1869, with
manuscript annotations by the author

...

cb₁ Princeton University Library

FRBR

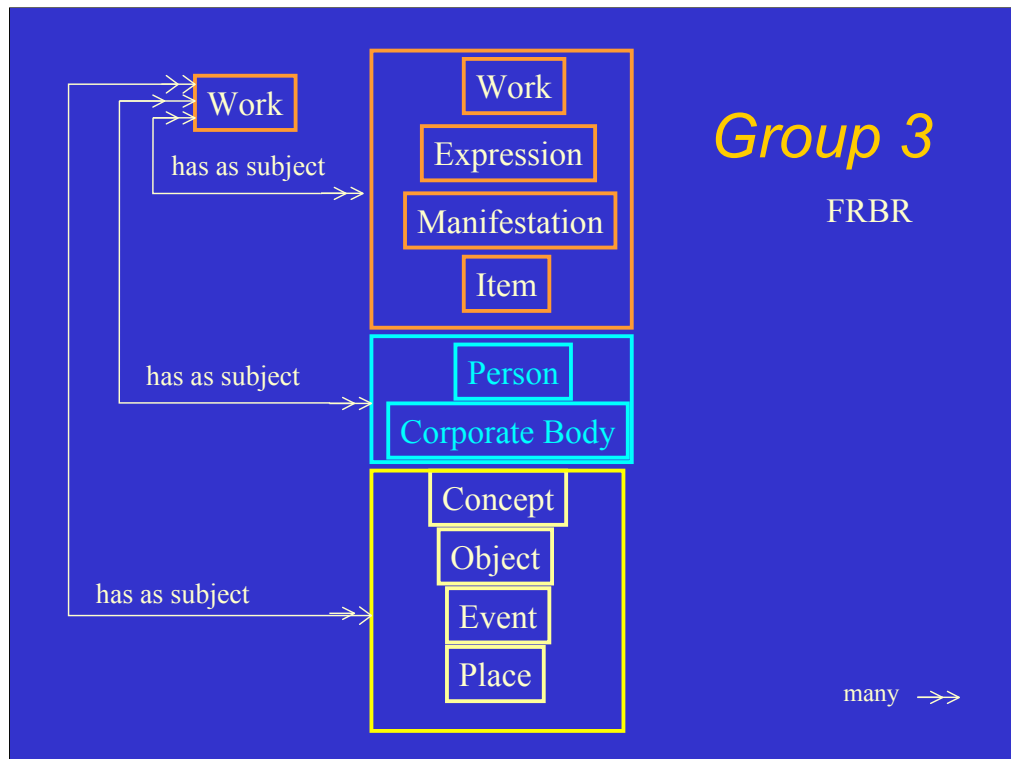
“owned by”

FRBR, p. 62

An “Owned by” relationship links an item with a person or corporate body that is the owner or custodian of the item.

This link serves to collocate all the items held by a single person or corporate body.

Q’s before Group 3 entities?



Quickly, Group 3 entities, introduce all the entities that can be the subject of works :

concept

object

event

place

and all of the Group 1 and Group 2 entities.

Relationships - Subject/Work

c₁ Romanticism

w₁ Morse Peckham's *Beyond the Tragic Vision*

w₂ *Romanticism reconsidered*, edited by Northrup Frye

...

FRBR

“is the subject of”

FRBR, p. 63

Any of the entities in the conceptual model including ‘work’ itself, may be the subject of a work. That is a work may be about a concept, an object, an event, a place, a person, a corporate body, or an expression, a manifestation, an item, or another work.

Here we have the concept, Romanticism, that is the subject of the two works we show here...and there are of course many more.

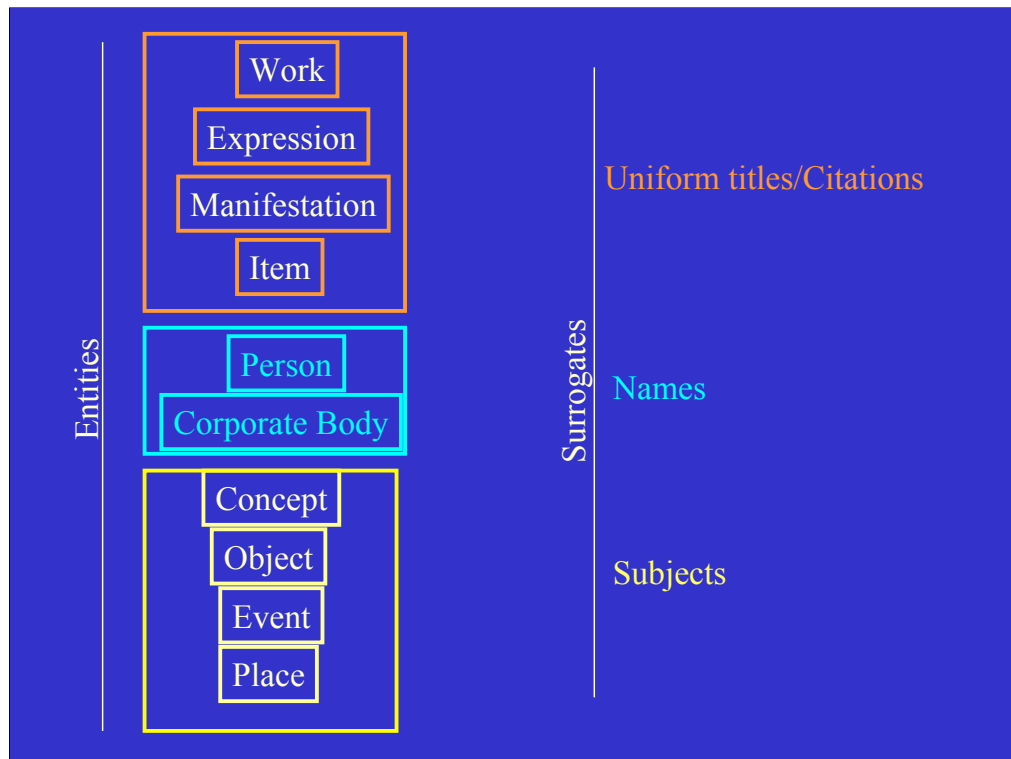
This link serves to collocate all the works relevant to that subject.

FRBR applications

- Denmark: VisualCat
- Australia: AustLit
- Indiana: digital music
- VTLS: Virtua's "FRBR-ized" catalog
- OCLC's WorldCat plans
- OCLC's Fiction Finder
- RLG's Web union catalog plans

FRBR has already been applied as the basis for several systems.

Denmark's VisualCat is an implementation built on the FRBR model. In Australia, the Austlit project uses FRBR in its displays. The University of Indiana has a music digital library project that embodies some of the concepts found in FRBR. VTLS has also designed a prototype system using the FRBR model – you may want to check it out in the exhibits when you go to the next library conference! OCLC and RLG are developing their future systems using a FRBR foundation and OCLC will soon show its Fiction Finder that uses FRBR concept. There are also other systems implementations in Australia, Europe, and springing up in the United States..



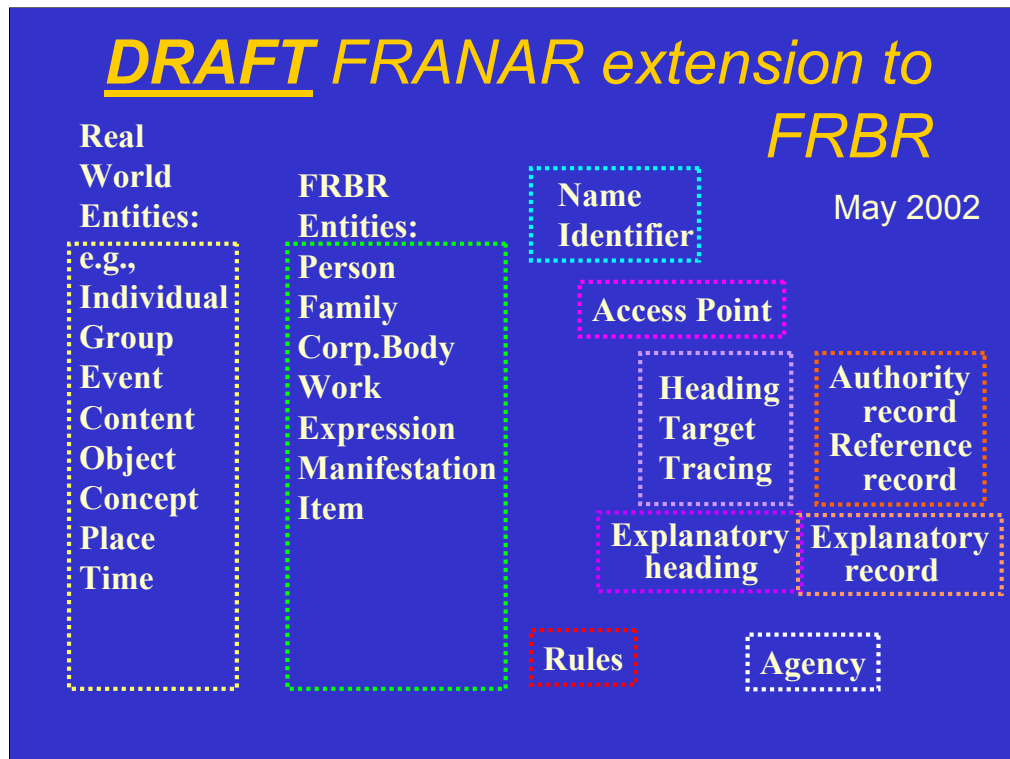
For Group 2 and Group 3 entities, libraries have devised controlled vocabularies to identify those entities by citing their name in a controlled form.

We control the name of a work, expression, manifestation, or item - by means of a uniform title (author/title or citation) in the *Anglo-American Cataloguing Rules*.

We control the name of a person or corporate body using a controlled or authorized form of name for the person or corporate body following *AACR* rules.

We control the 'name' of a concept, object, event, or place through controlled vocabularies for the concepts, like the Library of Congress Subject Headings (LCSH), Medical Subject Headings (MeSH), the Art and Architecture Thesaurus (AAT), the Thesaurus or Graphic Materials, etc.

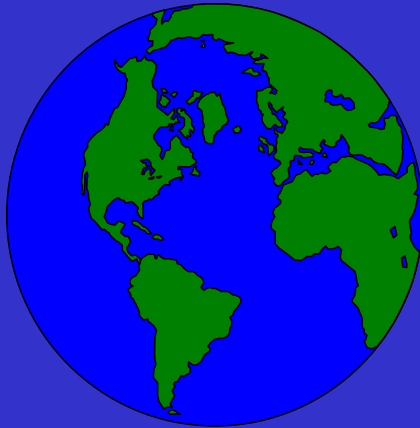
So FRBR is a model that expands to areas of authority control.



The IFLA Working Group on Functional Requirements for Authority Numbers and Records (FRANAR) is now chaired by Glenn Patton, and with Tom Delsey once again as consultant. FRANAR is working on this draft of the conceptual model extension to the realm of authority entities. We found it helpful to map the FRBR entities to “real world” entities shown here on the left. I’m not showing the relationships or any of the attributes, as this is very much a work in progress, but it gives you an idea of the direction we are heading.

We hope to have a report for worldwide review by this summer.

International Code for Bibliographic Description and Access



- IFLA Conferences 2003+
- Collaboration with ICA, ISO, DC, W3C, etc.
- Goal = Collaborative use in multiple environments
 - consistency
 - trust
 - authority

We are now at the stage of sharing internationally among libraries, as well as sharing globally with other information organizations - archives, museums, publishers, rights management and copyright organizations, the computer industry, and the Internet and Web communities. Is it now time to think of future international cataloging rules that make the best of existing rules and cataloging principles?

IFLA will sponsor a series of regional meetings of cataloging experts starting this summer of 2003 in Frankfurt, Germany to explore similarities and differences in our cataloging rules and to clarify where there need to be differences for language and cultural variations of our respective users. One goal is to facilitate collaborative use of bibliographic and authority information on a global scale that promotes consistency, assures trust, and gives authority to the information found.

FRBR futures

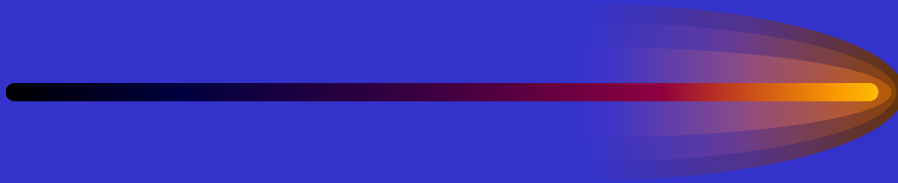
- Terminology
- Concepts
 - Entities
 - Relationships
 - Attributes
- Goals of bibliographic control
 - Finding
 - Collocating



The entities, relationships, and attributes in IFLA's FRBR model enable us to fulfill objectives of the catalog and will help us better provide bibliographic control in a global environment. FRBR brings a new vocabulary, new terminology, and a conceptual model that seems more relevant to today's Internet and digital world. We look forward to continued development of this model through the work in IFLA and applications around the world.

These are very exciting times with the advances in technology, and we have great opportunities working together worldwide.

Thank you!



Slides 28, 30, 32 and a variation of slide 26 were published in
Barbara B. Tillett, "Bibliographic Relationships." In *Relationships in the
Organization of Knowledge*, edited by Carol A. Bean and Rebecca Green,
19-35. Dordrecht : Kluwer Academic Publishers, 2001.
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Thank you.

Hickey, Thomas B., O'Neill, Edward T., and Toves, Jenny, OCLC Office of
Research. "Experiments with the IFLA Functional Requirements for Bibliographic
Records (FRBR)" *D-Lib Magazine* 8 no. 9 (Sept. 2002)
<http://www.dlib.org/dlib/september02/hickey/09hickey.html>

Le Boeuf, Patrick. "FRBR and Further." *Cataloging and Classification Quarterly*
32 no. 4 (2001): 15-52.